Jan. 30, 1934. W. S. QUIGLEY 1,945,072

DISPLAY APPARATUS

Filed June 24, 1932 2 Sheets-Sheet 1

FIG. 1.

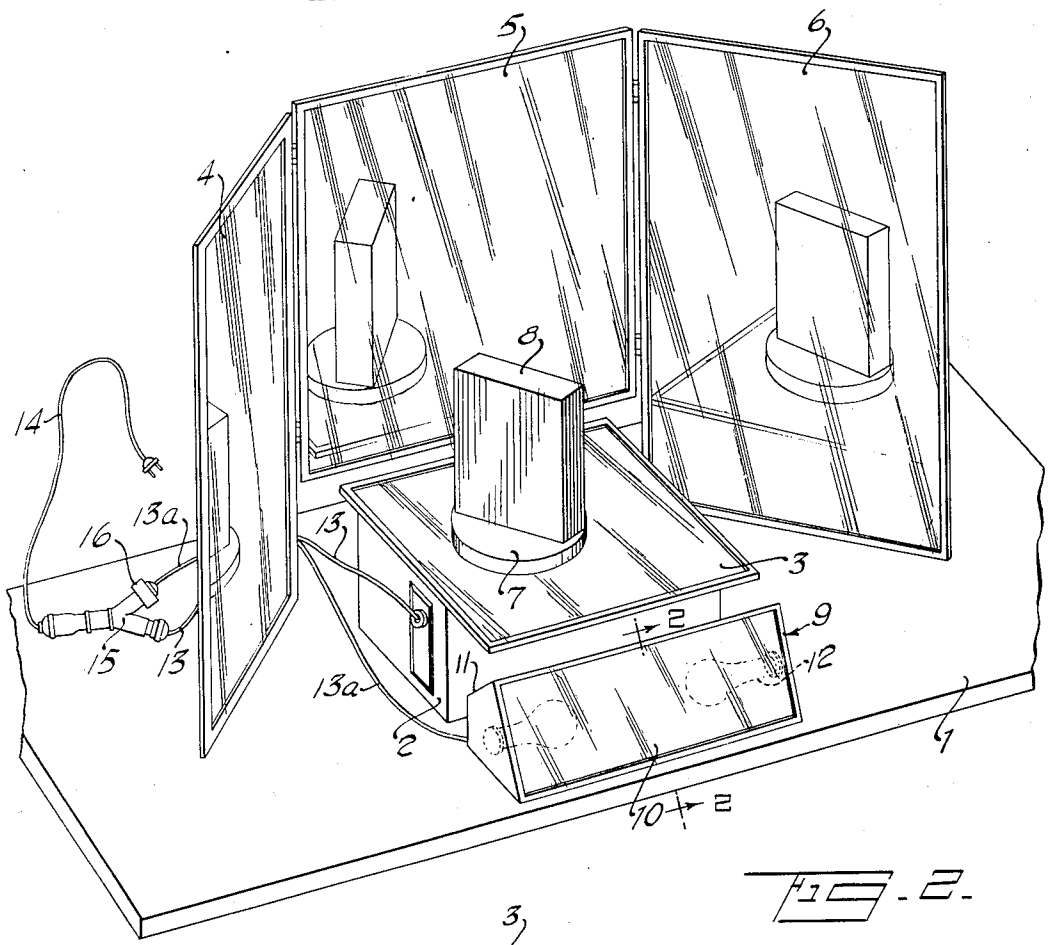
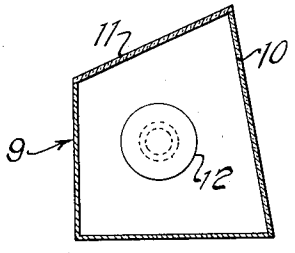


FIG. 2.



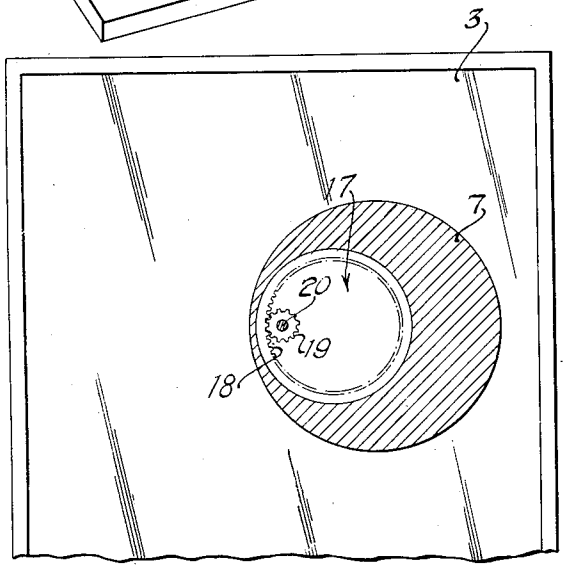


FIG. 5.

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Jan. 30, 1934. W. S. QUIGLEY 1,945,072

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Filed June 24, 1932 2 Sheets-Sheet 2

FIG. 3.

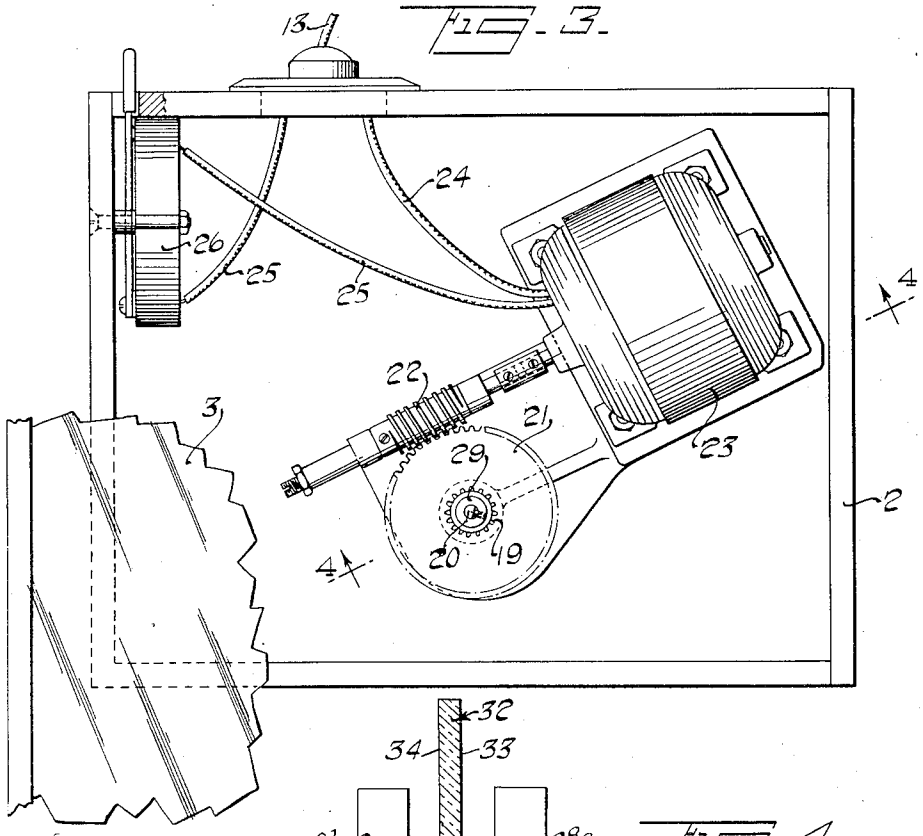
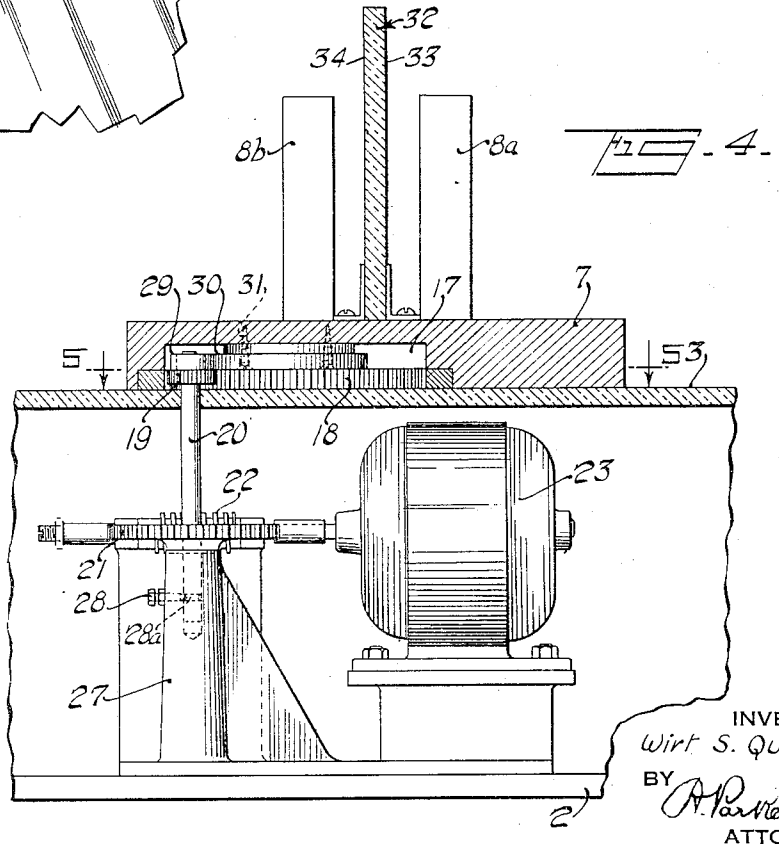


FIG. 4.



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DISPLAY APPARATUS

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Application June 24, 1932. Serial No. 619,066

5 Claims. (Cl. 40—33)

This invention relates to apparatus for use in show windows and other places for displaying articles and producing a series of illusions thereof by means of apparatus for moving said articles over and before an arrangement of mirrors, for the purpose of attracting the attention of possible purchasers thereto. In carrying out that purpose there are employed a combination of mirrors giving multiple reflections of the article or articles displayed and means for moving the latter through a more or less intricate path before said mirrors, while intermittently flashing an electric light on them. Preferably one of said mirrors is placed under the support for the articles displayed, while others are back of it, substantially opposite the observer's viewpoint and so arranged that he will look downwardly at an angle to the horizontal plane at said article and assembled mirrors. The best form of apparatus at present known to me embodying my invention is illustrated in the accompanying two sheets of drawings in which

Fig. 1 is a perspective view of the apparatus with parts broken away.

Fig. 2 is a detail cross section on line 2—2 of Fig. 1.

Fig. 3 is a partial plan view with parts broken away or shown in section.

Fig. 4 is a vertical section on line 4—4 of Fig. 3, and also shows a modification, and

Fig. 5 is a detail horizontal section on line 5—5 of Fig. 4, parts being broken away.

Throughout the drawings like reference characters indicate like parts. 1 represents a table top or other surface on which the apparatus rests. 2 is a box or casing having a mirror top 3, and containing the mechanism for sustaining and rotating a small table or other support 7 for the article 8, or articles 8*a*, 8*b*, (Fig. 4) to be displayed.

These would usually be packaged goods, the cartons of which would be exteriorly decorated with advertising and descriptive matter printed in attractive forms and accompanied perhaps by ornamental designs.

4 and 6 are panel mirrors hinged to the intermediate panel mirror 5, so that they can be adjusted to various angles each to the other as they partly surround the casing 2, as shown in Fig. 1. If desired, the vertical walls of casing 2 may also have reflecting surfaces.

A flashlight apparatus comprises a casing 9 with a translucent front 10 on which advertising or other descriptive matter may be printed to act as an illuminated sign when the electric lamps 12, 12, are lighted. 11 is a translucent upper panel through which the light of said lamps may shine on the article 8, and assembled mirrors behind it. Current for the lamps is supplied through a two wire cord 13*a* from one branch of the Y-socket 15, which can be plugged into a lamp socket by cord and plug 14. In this branch of socket 15 may be inserted any desired form of intermittent current interrupter, such as the condenser indicated at 16.

According to the preferred form of the invention some mechanism should be employed to rotate the goods support 7, and preferably also to give it a motion of translation in a plane parallel to mirror 3, while rotating it. A convenient apparatus for doing that work is illustrated in Figs. 3, 4 and 5. Current delivered through a two wire cord 13, and conductors 24 and 25 controlled by rheostat 26, operates motor 23, on the armature shaft of which is a worm 22, meshing with worm wheel 21. Said worm wheel is fast on vertical shaft 20 journaled in housing 27 and held therein by screw 28 set in said housing and loosely engaging a circumferential groove 28*a* on said shaft. The upper end of shaft 20 extends above mirror 3 into a circular cavity 17 in the under side of support member 7, and is provided with a pinion 19, and a roller 29 located above said pinion. The cavity 17 in 7 is provided with an annular internal gear 18 fastened to its circular walls at a height such that it will mesh with pinion 19. Mounted in and concentric with the walls of cavity 17 is a thick disc held by screws 31 to the top of the cavity and so located as to be in contact with roller 29, when pinion 19 is in mesh with gear 18. Support 7 rests loosely on mirror top 3 and can be lifted off when desired.

When current is turned on motor 23 will rotate shaft 20, and pinion 19 will thereupon cause gear 18 to rotate around the center of the latter which is also the center of disc 30. As these elements of the support member 7 are eccentric to its center, it must therefore swing as an eccentric around the common center of 18 and 30, but, as it is subjected to a driving force from pinion 19 on gear 18 in one direction on one side of shaft 20, and to a frictional drive in the opposite direction on the other side of the shaft from roller 29 bearing on disc 30, it also and at the same time swings around the axis of shaft 20 as an eccentric center constantly shifting relatively to the other center of revolution. The combined effect of the interlacing of these eccentrics' paths produces a resultant "waltzing" movement of any

package of goods on support 7 which is most effective in attracting attention from the observer, especially when he sees a multiplicity of reflections of the package or packages, some of them upside down, all going through the same crazy gyrations.

The above described visual effects can be further heightened if the vertical partition member 32 shown in Fig. 4 be used with its opposite faces 33 and 34 presenting different colors and packages were placed on both sides of it. The preferred procedure is to make the partition 32 of clear glass, covering one side of it with an aluminum paint producing a silver color on that side, but having a black base which shows through the glass from the other side.

Other forms of motion might be given to the goods support 7.

In all cases where a horizontal mirror is placed below the goods support 7, the latter should have horizontal dimensions less than those of such mirror, so that an area of reflecting surface will show around said support in all positions it may assume. The mirror panels 4 and 6 may be longer than the middle panel 5, as shown in Fig. 1, so that said panel 5 will not rest on table 1.

The current interrupting device 16 may be dispensed with and a steady illumination of the apparatus employed.

Having described my invention, I claim:

1. In a display stand the combination of a horizontal stationary mirror exposed to the view of the observer, a disc of much less area than said mirror rotatably mounted above it closely adjacent to its upper surface and substantially centrally thereof, to support an article to be placed thereon for display, means for rotating said disc, and a plurality of vertical mirrors placed behind said disc and horizontal mirror and partly surrounding them; whereby the observer, when gazing downward on said article from a position opposite said vertical panels, will also see a variety of reflections of various sides thereof at various angles produced by said assemblage of mirrors.

2. A combination such as defined in claim 1 in which said means for rotating said support also move it about over the surface of said horizontal mirror within the boundaries thereof.

3. An apparatus such as defined in claim 1 combined with an intermittently operating electric flash light device located at the edge of said horizontal mirror opposite said vertical mirrors.

4. A combination such as defined in claim 1 in which said vertical mirrors are angularly adjustable, each with reference to the other.

5. An apparatus such as defined in claim 1 combined with a single partition member projecting vertically upward from and arranged diametrically of said disc, said partition member having one surface of a plain, solid color contrasting with that of its other opposite surface.

WIRT S. QUIGLEY.